What is Claimed is:

1.   A method of maintaining association integrity of Enterprise JavaBeans (EJBs) during EJB passivation and reactivation comprising:

obtaining a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB; and

registering the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a collection registry.

2.   A method according to Claim 1 wherein the registering comprises registering the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a collection registry in response to passivation of the source EJB.

3.   A method according to Claim 2 further comprising:

reactivating the source EJB; and

fetching the collection of target EJBs that are associated with the source EJB that is reactivated from the collection registry in response to traversing the one-to-many or many-to-many association of the source EJB that is reactivated.

4.   A method according to Claim 2 further comprising:

reactivating the source EJB

fetching the collection of target EJBs that are associated with the source EJB that is reactivated from the collection registry if the collection of target EJBs that are associated with the source EJB is registered in the collection registry; and

materializing the collection of target EJBs that are associated with the source EJB that is reactivated from secondary storage if the collection of target EJBs that are associated with the source EJB is not registered in the collection registry.

5.   A method according to Claim 1 wherein the one-to-many or many-to-

many association between the source EJB and the collection of target EJBs is managed by a link factory, and wherein the registering comprises:

creating the collection registry by the link factory in response to traversing the one-to-many or many-to-many association of the source EJB; and

5 registering the collection of target EJBs that are associated with the source EJB in the collection registry.

6. A method according to Claim 2:

wherein the one-to-many or many-to-many association between the source EJB

10 and the collection of EJBs is managed by a link factory;

wherein the registering comprises:

creating a collection registry by the link factory for the one-to-many or many-to-many association in response to traversing the one-to-many association or many-to-many association of the source EJB; and

15 creating a link object by the link factory to manage an instance of the one-to-many or many-to-many association; and

wherein the fetching comprises:

checking the collection registry by the link object in response to the one-to-many or many-to-many association not being materialized;

20 returning the collection of EJBs if the link object finds the collection of EJBs in the collection registry; and

materializing the target collection if the target collection is not contained in the collection registry.

25 7. A method according to Claim 6 wherein the materializing further comprises referencing the collection by the link object.

8. A method according to Claim 6 wherein the fetching further comprises:

returning the target collection by the link object if the one-to-many or many-to-

30 many association is materialized.

9.   A system for maintaining association integrity of Enterprise JavaBeans (EJBs) during EJB passivation and reactivation comprising:

a collection registry; and

a module that is configured to obtain a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB, and to register the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in the collection registry.

10.   A system according to Claim 9 wherein the module is configured to register the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a collection registry in response to passivation of the source EJB.

11.   A system according to Claim 10 wherein the module is further configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry in response to traversing the one-to-many or many-to-many association of the source EJB that is reactivated.

12.   A system according to Claim 10 wherein the module is further configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry if the collection of target EJBs that are associated with the source EJB is registered in the collection registry, and materialize the collection of target EJBs that are associated with the source EJB that is reactivated from secondary storage if the collection of target EJBs that are associated with the source EJB is not registered in the collection registry.

13.   A system according to Claim 9 further comprising:

a link factory that is configured to manage the one-to-many or many-to-many association between the source EJB and the collection of target EJBs;

wherein the module is configured to register the collection of target EJBs by creating the collection registry by the link factory in response to traversing the one-to-many or many-to-many association of the source EJB and registering the collection of target EJBs that are associated with the source EJB in the collection registry.

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14. A system according to Claim 10 further comprising:

a link factory that is configured to manage the one-to-many or many-to-many association between the source EJB and the collection of EJBs;

wherein the module is configured to register the collection of target EJBs by

10 creating a collection registry by the link factory for the one-to-many or many-to-many association in response to traversing the one-to-many association or many-to-many association of the source EJB and creating a linked object by the link factory to manage an instance of the one-to-many or many-to-many association; and

wherein the module is configured to fetch the collection of target EJBs by

15 checking the collection registry by the link object in response to the one-to-many or many-to-many association not being materialized, returning the collection of EJBs if the link object finds the collection of EJBs in the collection registry and materializing the target collection if the target collection is not contained in the collection registry.

20 15. A computer program product for maintaining association integrity of Enterprise JavaBeans (EJBs) during EJB passivation and reactivation, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

25 computer-readable program code that is configured to obtain a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB; and

computer-readable program code that is configured to register the collection of

30 target EJBs that are associated with a source EJB in a one-to-many or many-to-many

association in a collection registry.

16.   A computer program product according to Claim 15 wherein the computer-readable program code that is configured to register comprises computer-readable program code that is configured to register the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a collection registry in response to passivation of the source EJB.

17.   A computer program product according to Claim 16 further comprising:
        computer-readable program code that is configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry in response to traversing the one-to-many or many-to-many association of the source EJB that is reactivated.

18.   A computer program product according to Claim 16 further comprising:
        computer-readable program code that is configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry if the collection of target EJBs that are associated with the source EJB is registered in the collection registry; and
        computer-readable program code that is configured to materialize the collection of target EJBs that are associated with the source EJB that is reactivated from secondary storage if the collection of target EJBs that are associated with the source EJB is not registered in the collection registry.

19.   A computer program product according to Claim 15 wherein the one-to-many or many-to-many association between the source EJB and the collection of target EJBs is managed by a link factory, and wherein the computer-readable program code that is configured to register comprises:
        computer-readable program code that is configured to create the collection registry by the link factory in response to traversing the one-to-many or many-to-many

association of the source EJB; and

computer-readable program code that is configured to register the collection of target EJBs that are associated with the source EJB in the collection registry.

5   20.   A computer program product according to Claim 16:

wherein the one-to-many or many-to-many association between the source EJB and the collection of EJBs is managed by a link factory;

wherein the computer-readable program code that is configured to register comprises:

10   computer-readable program code that is configured to create a collection registry by the link factory for the one-to-many or many-to-many association in response to traversing the one-to-many association or many-to-many association of the source EJB; and

computer-readable program code that is configured to create a link

15   object by the link factory to manage an instance of the one-to-many or many-to-many associations; and

wherein the computer-readable program code that is configured to fetch comprises:

computer-readable program code that is configured to check the

20   collection registry by the link object in response to the one-to-many or many-to-many association not being materialized;

computer-readable program code that is configured to return the collection of EJBs if the link object finds the collection of EJBs in the collection registry; and

25   computer-readable program code that is configured to materialize the target collection if the target collection is not contained in the collection registry.

21.   A system for maintaining association integrity of Enterprise JavaBeans

30   (EJBs) during EJB passivation and reactivation comprising:

means for obtaining a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB; and

means for registering the collection of target EJBs that are associated with a

5   source EJB in a one-to-many or many-to-many association in a collection registry.

22.   A system according to Claim 21 further comprising:

means for fetching the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry if the collection of target

10   EJBs that are associated with the source EJB is registered in the collection registry; and

means for materializing the collection of target EJBs that are associated with the source EJB that is reactivated from secondary storage if the collection of target EJBs that are associated with the source EJB is not registered in the collection registry.